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DATA CENTER OPERATIONS BRANCH

NDS OPERATIONS PROCEDURE MANUAL
No. P-E005

OPERATIONS CONTROL OFFICER
16 July 1985

EXPLOITATION SUPPORT DATA (ESD) PROCESSING

SYMBOLIC TITLE: NONE

ORIGINATOR:

25X1

DISTRIBUTION:

Original - ED/CIB/CM/DOC

1 - Originator

2 - OD/DCOB/NDS OPS

1 - OD/DCOB/OPS CTL

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DOCUMENT CHANGE REQUEST (DCR)

DCR NO: 0048
 DATE LOGGED: 7/24/85
 DATE CLOSED: 8/22/85

TITLE <u>ESD Processing</u>		NO. <u>P-E005</u> <small>(IF NEW, ASSIGNED BY CIB/DOC)</small>
INITIATOR	SECTION APS	DATE <u>18 Jul 85</u> 25X1
TECHNICAL MONITOR	SECTION	DATE _____ PHONE _____
SYSTEM AFFECTED: <u>X</u> 1100/OPS	1100/M&A	COINS _____ RTMS _____ OTHER _____
BRANCH CHIEF SIGNATURE	_____	DATE <u>18 Jul 85</u> 25X1
INITIATING DOCUMENT NO.: DR # _____	RFC # <u>R0955-3</u>	OTHER _____
NEED FOR CHANGE:		
To reflect current operational procedures concerning the appropriate actions to take when processing an R729 message with an improper sequence number.		
This closes Task #3 of RFC# R0955-3.		
DCOB INTERIM APPROVAL:		25X1
C/DCOB:	DATE <u>8/6/85</u>	CONCUR <u>/</u> NON-CONCUR _____
FINAL APPROVAL:		25X1
ED:	DATE <u>18 Jul 85</u>	CONCUR <u>/</u> NON-CONCUR _____
C/OD:	DATE <u>8/19/85</u>	CONCUR <u>/</u> NON-CONCUR _____

ADMINISTRATIVE-INTERNAL USE ONLY

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DOCUMENT CHANGE REQUEST (DCR)

DCR NO: 043
 DATE LOGGED: 7/17/85
 DATE CLOSED: 7/19/85

TITLE	ESD PROCESSING		NO.	P-6 Q05	
INITIATOR		SECTION	A PS	(IF NEW, ASSIGNED BY CTR/D025X1 DATE 7-1-85) 25X1	
TECHNICAL MONITOR		SECTION		DATE _____ PHONE _____	
SYSTEM AFFECTED:	✓ 1100/OPS	1100/M&A	COINS	RTMS	OTHER
BRANCH CHIEF SIGNATURE	DATE 15 Jul 85 25X1				
INITIATING DOCUMENT NO.:	DR #	RFC #	R 0972-3 OTHER Task 4		

NEED FOR CHANGE: Reflect current operational procedures concerning the appropriate actions to take when processing an ESD, and errors are encountered by MAFGEN which are fatal to the image.

Closes Task 4 of R 0972-3

DCOB INTERIM APPROVAL:

C/DCOB:

DATE 7/15/85

CONCUR

NON-CONCUR

25X1

FINAL APPROVAL:

C/ED

C/OD

DATE 15 Jul 85

CONCUR

NON-CONCUR

25X1

DATE 16 July 85

CONCUR

NON-CONCUR

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DOCUMENT CHANGE REQUEST (DCR)

DCR NO: 0042

DATE LOGGED: 7/1/85

DATE CLOSED: 7/15/85

TITLE ESD Processing NO. P-E005
 INITIATOR SECTION DCOB (IF NEW, ASSIGNED BY CIB/DOC DATE 7/1/85 PHON 25X1

TECHNICAL MONITOR SECTION DATE PHONE

SYSTEM AFFECTED: X 1100/OPS 1100/M&A COINS RTMS OTHER

BRANCH CHIEF SIGNATURE DATE

INITIATING DOCUMENT NO.: DR # RFC # OTHER

NEED FOR CHANGE: Update document to reflect current operational procedures.

DCOB INTERIM APPROVAL:

C/DCB

DATE 7/1/85CONCUR XNON-CONCUR

25X1

FINAL APPROVAL

C/ED

DATE 7/8/85CONCUR NON-CONCUR

C/OD

DATE 7/8/85CONCUR VNON-CONCUR **TOP SECRET**

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DOCUMENT CHANGE REQUEST (DCR)

DCR NO: 0035

DATE LOGGED: 4/19/85

DATE CLOSED: 7/15/85

TITLE <u>ESD Processing</u>		NO. <u>P-E005</u>		
INITIATOR	SECTION <u>APS</u>	(IF NEW, ASSIGNED BY CTR/DO		25X1
TECHNICAL MONITOR	SECTION	DATE	PHONE	
SYSTEM AFFECTED: <input checked="" type="checkbox"/> 1100/OPS	1100/M&A	COINS	RTMS	OTHER
BRANCH CHIEF SIGNATURE				DATE <u>18 Apr 85</u>
INITIATING DOCUMENT NO.: DR # <u> </u>		RFC # <u>R0901-3</u>	OTHER <u> </u>	
NEED FOR CHANGE:				
<p>Close Task 3 of RFC#R0901-3.</p> <p>Reflect current operational procedures concerning the appropriate actions to take when processing primary, alternate and backup ESDs.</p>				
DCOB INTERIM APPROVAL:				
C/DCOB	DATE <u>7/8/85</u>	CONCUR <u>X</u>	NON-CONCUR <u> </u>	
FINAL APP	DATE <u>7/8/85</u>	CONCUR <u>Y</u>	NON-CONCUR <u> </u>	
C/ED:				
C/OD:				

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DATA CENTER OPERATIONS BRANCH

NDS OPERATIONS PROCEDURE MANUAL
NO. P-E005

OPERATIONS CONTROL OFFICER
16 July 1985

EXPLOITATION SUPPORT DATA (ESD) PROCESSING

Purpose

1. This procedure sets forth guidelines and information necessary for operations personnel to determine ESD processing priorities based on primary and/or backup load status indicators. Some of the console error messages produced by the MPFGEN validation process have also been included in this manual in order to provide a partially documented source of error recovery procedures.

Background

2. Due to a discontinuity between MIN MODS specifications and the Interface Control Document specifications regarding the processing of Exploitation Support Data it has become necessary to incorporate an OCO/Operator decision action within the ESD automatic processing chain of events. As in the past, the NPIC Data System (NDS) processes the first ESD received (normally the Primary Load). This factor, coupled with early receipt of ESD, precluded evaluation of ESD Status Messages prior to the start of processing. Evaluation of these messages is necessary to determine which ESD should be entered into the NDS. Once an ESD (Primary or Backup) is processed into the NDS system it cannot be removed or replaced. The decision/intervention criterion outlined in Procedures below, will more accurately assure that the correct ESD is processed.

References

3. None

Definitions

4. Definitions of terms used within this procedure are as follows:

- a. DTX01 Runstream initiated by the Communications Symbiont Processor (CSP) upon receipt of an ESD from the external communications line DLT001.
- b. RISPP Runstream started by the ESDRIVER software for a particular imaging satellite (IS) and pass (PP) received in the NDS.

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c. MD	Mission Director, [redacted]	25X1
d. OD	Operations Director, [redacted]	25X1
e. P	Primary load.	
f. B	Backup load.	
g. T	Suffix on REC or REF ID numbers when a test is being run--see paragraph 6b(3).	

Responsibilities

5. Operations Control Officers, computer operators and shift supervisors are responsible for complying with this directive. The OCO is the final authority on ESD processing action on the NDS.

Processing

6. Processing of ESDs for any one imaging day shall consist of a preplanning schedule and a processing schedule:

a. Preplanning:

- (1) Prior to the start of the imaging day, the Operations Officer, Operations Facility [redacted], will provide the NPIC OCO with the daily schedule (ESD ETA) via telephone. The OCO will create an associated ESD Processing Summary Sheet with Rev Number and ESD ETA for each scheduled pass for the day.
- (2) The OCO will ensure that the ESD Processing Summary sheet is passed to the NDS computer console for use by computer operators and their supervisors.

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b. Processing:

(1) General:

- (a) NDS software changes have been incorporated to preclude system acceptance of ESD runstreams until positive confirmation of their applicability has been determined. The use of automatic time delays before system acceptance, status messages, and operator intervention capabilities will permit evaluation and decisive action to assure that the correct ESD is processed by the NDS.
- (b) Primary ESDs (RECUR 717) will normally be transferred to NPIC at approximately 40 minutes prior to the start of imaging for I/S 5 and approximately 20 minutes prior to the start of imaging for I/S 1.

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- (c) Status messages (RECUR 716) containing either a 'P' or 'B' flag to indicate which ESD is appropriate shall be displayed on the NDS computer operators console. Additionally, the message "***PROCESS XXXXXX ESD***- ANSWER GO TO CONTINUE" will appear. The run will then wait for an operator answer. These status messages normally will be received between 5 minutes before start of imaging to 10 minutes after start of imaging.
- (d) Upon NDS receipt of any ESD, an RISPP runstream will be generated and go to backlog with a 70 minute delay. RISPP received for a particular IS (IS) and Pass (PP) is automatically run, unless manually released or held, at the expiration of the 70 minute time delay.
- (e) Backup ESDs (RECUR 718) will only be transmitted to NPIC when the primary load cannot be used and defaulting to the backup load is necessary. This will normally take place from 5 minutes before start of imaging to 20 minutes after start of imaging. Backup ESD (R718) normally arrives in the NDS after the status message (R716) is received.

(2) Specifics:

- (a) Notify OCO if: ESD (R717) is 15 minutes late, Status (R716) has not arrived 35 minutes after ESD (R717), or Backup ESD (R718) has not arrived 10 minutes after 'B' status message (R716).
- (b) Possible conditions/status messages and related actions required are:

ACTIVITY	OPERATOR ACTION	OCO ACTION
Primary ESD (R717) received *RISPP in backlog P status (R716) received	Change start time and release	None
Primary ESD (R717) NOT received	Notify OCO Remove R717	**Contact Mission Director.

* RISPP = R(IS)(PASS)

Examples: R0412 or R0501

[redacted] Mission Director (MD). If no answer
 [redacted] Security) and request they page the MD. Leave message
 for MD to call the OCO.

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ACTIVITY	OPERATOR ACTION	OCO ACTION
Primary ESD (R717) received RISPP in backlog B status (R716) received Backup (R718) not received	Hold RISPP Notify OCO Wait for R718	**Contact Mission Director. If Backup, direct R717 RISPP removal after receiving R718 RISPPA. If no imaging cancel RISPP.
Primary (R717) and Backup (R718) received RISPP and RISPPA in backlog No status message, status overdue	Hold RISPPA, remove RISPP Notify OCO	**Contact Mission Director. Verify which load. If backup run RISPPA; if primary OCO must edit RISPPA to reflect SSN of primary.
Primary ESD (R717) received Second Primary ESD (R717) received for same ESD RISPP and RISPPA in backlog	Notify OCO	**Contact Mission Director to verify if an alternate R717 was sent. Inform operator which R717 to process.
No ESD received No RISPP in backlog No status ESD receipt overdue	Notify OCO after 15 minutes has elapsed from scheduled time of receipt	**Contact Mission Director. Verify activity. Direct action.
Either Primary (R717) or Backup (R718) ESD received Good status flag (P or B) Bad REV on status	Hold RISPP or RISPPA Notify OCO	**Contact Mission Director. Verify status/REV. Direct operator action.

[REDACTED] - Mission Director (MD). If no answer [REDACTED] (Security) and request they page the MD. Leave message for MD to call the OCO.

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ACTIVITY	OPERATOR ACTION	OCO ACTION
Error		
Not All Images Written To MPF	Notify OCO. Print & save RISPP Runfile listing for OCO.	Either call Ground Commo and request a retransmission of the ESD, or notify O&M team.
Not All Images Sent To P&A		Save all listings.
nnn Images Not Processed		
Image Count Discrepancy		
Print And Save RISPP Listing For O&M Team		The RISPP Runfile listing will indicate the location and contents of the bad ESD data fields.
R729 Message Sequence Problem Answer Go To Continue	Enter GO to continue Notify OCO	See Appendix A.

OCO NOTE: If for any reason you cannot reach the MD and you are running out of time in which you need to make a release decision, call the Operations Director on [REDACTED]

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(3) Special Test Conditions:

(a) Due to MIN MODS changes, REC and REF message numbers previously used only for test messages are now also valid operational message numbers. Since that number is now valid, the fact that it is a test is transparent to both the operator and the ESD operational code. If one of these messages were allowed to process it would result in incorrect P&A lists, CPAT feedback, PREDICT lists and mensuration in the MPF. The operational software has been changed therefore, to look for a character immediately following the message number (indicating a test message) and to then stop processing. Operational software has also been changed to display this character as a suffix to the message number which will alert the operator that it is a test and that processing has halted.

(b) When a test message is received by the NDS, a DTX01 runstream is initiated. This runstream catalogues a file for the message, XCH*D~~ISSN~~#, and starts ESD/DRIVER. ESD/DRIVER will send a display to the console including the message station serial number (SSN), the character following the message number which specifies a test, and a brief note requesting that the OCO be informed of the receipt.

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(c) The OCO shall inform ED/SEB that a test message has been received. ED/SEB will advise either to save to tape, list or delete the message. DLB/DLC delete should not be run until ED has been contacted.

5a

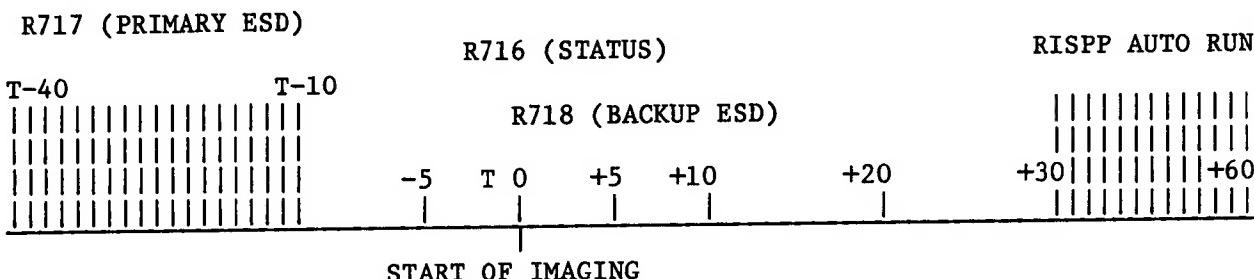
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7 The following two graphics depict the optimum timeline as viewed [] using Start of Imaging as Time Zero (T 0) and at DCOB using Receipt or Primary ESD as R 0:

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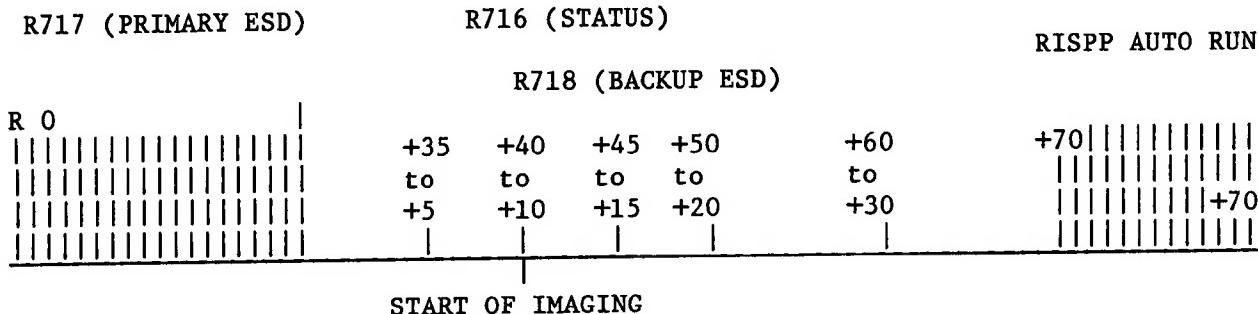
[] 25X1

Optimum NDS S/W Processing Timeline

(NOTE: The estimated time of arrival of primary ESDs should equate to T-40 at [] (R 0 at DCOB). The actual arrival time may be later which would shift the 70 minute delay period to RISPP AUTO RUN in a like direction for a like amount. If RECUR messages are not received within a reasonable time from the estimated schedule, operators should notify the OCO of their concern:

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DCOB

Optimum NDS S/W Processing Timeline

NOTE: The estimated time of arrival of primary ESDs should equate to T-40 at [] (R 0 at DCOB). The actual arrival time may be later which would shift the 70 minute delay period to RISPP AUTO RUN in a like direction for a like amount. If RECUR messages are not received within a reasonable time from the estimated schedule, operators should notify the OCO.

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APPENDIX A. INSTRUCTIONS FOR R729 MESSAGE SEQUENCE PROBLEMS

A. Contact the Tasking Segment Officer (TSO) [redacted] and the Senior Tasking Officer IEG/CSRD/DBB. The incoming R729 sequence number and the expected R729 sequence number are listed on the operator console.* Notify the TSO of this discrepancy.

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B. If it is determined that processing of this R729 Message can continue its runstream must be manually started. The file name of this runstream is listed in a message on the Operator Console (RUNSTREAM FILE = XMS*C-RFNXMSXXXX).

C. The control file must now be updated to hold the expected sequence number of the next R729 message to be received. This should be done with a "change" command in "EDIT" of file XCH*R729-SEQ. Verify this number with the TSO.

* The incoming R729 sequence number is located in file XCH*D1XXXX. It is a four character number starting in column 15 of row 5. The expected sequence number is located in control file XCH*R729-SEQ.